

# **University News**

- **Legislation for Varsity Autonomy**
- **University Management**
- **Priorities and Goals of Education**
- **Asia-Pacific Information Network  
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# UNIVERSITY NEWS

VOL. XXIV

No. 28

Price

JULY 23

1986

Re. 1.00

A Weekly Chronicle of Higher Education published by the Association of Indian Universities

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## AIU Seeks Legislation for Varsity Autonomy

A delegation of the Association of Indian Universities (AIU) led by the President, Prof. S.V. Chittibabu, VC, Annamalai University, called on Prime Minister Rajiv Gandhi on 15th July, 1986 to convey its concern at the growing erosion of university autonomy and plead for enactment of a central legislation for this purpose. Other members of the delegation were Prof. G. Ram Reddy, Vice-President AIU and VC, Indira Gandhi National Open University, Prof. Ramaranjan Mukherjee, VC, Rabindra Bharati University, Dr. K. Gopalan, VC, Cochin University of Science and Technology, Shri L.D. Kataria, VC, Haryana Agricultural University, Prof. Upendra Baxi, former VC, South Gujarat University, and Dr. Jagdish Narain, Secretary AIU.

Prof. Chittibabu apprised the Prime Minister of the deep concern of the General Body of the Association which met in a Special Meeting in January last to discuss the disturbing trends affecting the autonomy of the universities in India. References were made to the mass resignation of Vice-Chancellors in Bihar last year and the happenings in Bombay University and M.D. University, Rohilkhand. Fostering a spirit of autonomy for educational institutions has also been emphasised in the National Policy on Education, recently approved by the Parliament. It was stressed that strengthening of university autonomy is essential through depoliticisation of the university campuses as well as safeguarding the high offices of the Vice-Chancellors and the Chancellors.

The delegation presented a memorandum to the Prime Minister pleading for the enactment of a central legislation to ensure functional autonomy for the Chancellors and Vice-Chancellors, a uniform procedure for selection of the Vice-Chancellors, a fixed tenure of office of the Vice-Chancellor, and the deletion of powers to suspend a Vice-Chancellor. It was felt that such a legislation would also curb discretionary funding procedures by providing equitable and efficient norms for resource allocation.

As the Government is currently formulating a Plan of Action for the implementation of the National Policy on Education, this is an opportune moment, the delegation suggested, to set up a time-bound Task Force to draw up a central legislation to safeguard university autonomy which would apply to all the Central and State Universities. President Chittibabu offered fullest cooperation of the Association to such a Task Force in framing the proposed legislation. The delegation, which held very cordial discussions with the Hon'ble Prime Minister, was assured of due consideration of the memorandum by the Government.

Text of the memorandum submitted to the Prime Minister is being reproduced for the information of academics and others concerned with university education in India.

Editor :

**SUTINDER SINGH**

# **Memorandum Submitted to the Prime Minister**

## **Hon'ble Shri Rajiv Gandhi**

**Some most disturbing trends adversely affecting the autonomy of the Indian Universities have dramatically come to surface in the recent times. The mass resignations of Vice-Chancellors in Bihar, and the suspension of a Vice-Chancellor in Rohtak symbolise the crisis in the autonomous governance of Indian universities, young and old. There has been in evidence in the state legislation a specific form of the erosion of the university autonomy through provisions subjecting the tenure of the high office of the Vice-Chancellor to the "pleasure" of the Chancellor (e.g. Bihar and Karnataka).**

**The Association of Indian Universities at its Special General Body Meeting on January 8 and 9, 1986 resolved to bring these serious developments to the personal attention of the Hon'ble Prime Minister. The Association notes with warmest appreciation the Hon'ble Prime Minister's positive views on depoliticization of the university campuses and on safeguarding university autonomy. We also note with satisfaction the emphasis placed, as a result of this, on "the creation of a spirit of autonomy for educational institutions" (para 10.1 of the National Policy on Education 1986).**

**With a view to helping the concretisation of this policy, and the Hon'ble Prime Minister's vision of university autonomy, the Association urges the Union Government to consider enacting a legislation (now that Education is in the Concurrent List) assuring, among other things (a) functional autonomy for the Chancellors and Vice-Chancellors (b) a uniform procedure for selection of Vice-Chancellors (c) the provision for a fixed tenure of office of the Vice-Chancellor, unbindered by the pleasure of the Chancellor and (d) the deletion of powers to suspend a Vice-Chancellor whose term of office is in any case statutorily specified. In addition, there is need for such legislation to provide equitable and efficient norms for resource allocation, including the routine grants-in-aid to the universities, since the present diversity of discretionary funding procedures is also a potent and continuing source of frustration of university autonomy.**

**The Association requests the Hon'ble Prime Minister to set up a time-bound task force for the formulation of such central legislation. The Association, charged by its charter to safeguard university autonomy, will be happy to assist the task force in all possible ways.**

# UNIVERSITY MANAGEMENT

## A Plea to Open Up the System

J.N. Kapur\*

Many of the difficulties in the management of Indian university system arise from the great secrecy surrounding many decision-making processes and in particular, decision processes concerning evaluation of teachers and students. This secrecy enables some persons to misuse their powers since all their acts of commission and omission can be concealed by this veil of secrecy. Even when decisions are fair, persons who are hurt by the decisions do not know the full reasons and always tend to explain their own failures as due to the prevalent unfairness in the system. This leads to frustrations, tensions and politics of manipulation. The solution for this problem lies in making the system as open as possible and reduce the secrecy to the absolute minimum necessary.

Consider the external examination system. The examiners can be as careless as they like in marking answer scripts. They can 'murder' students en masse or they can give generous marks without examining carefully the answer-books because the student whose fate is being decided cannot see the answer-book. It is true that in some large examination systems, there are some checks and counterchecks in the form of head examiners, and deputy head examiners who can re-examine a sample of answer-books, but even this check is not available when the number of candidates is relatively small. The managements of the universities have to face problems of discipline and even of law and order when students are not satisfied with marking. Many universities have introduced re-evaluation, but it is a long process and it is still secret. If an examiner increases the marks of a candidate under pressure, there is little likelihood of this fact being known because of this secrecy. The whole examination system thus loses its credibility. The vice-chancellors instead of developing their universities, have to spend all their efforts in fighting small or big issues caused by the secrecy in the examination system.

The paper-setters are on the whole very careful in setting easy standard questions, thus diluting standards heavily, but even then, the examiners always do not know what has been taught in individual colleges and the university managements have to face the problems of walkouts and re-examinations.

On the other hand, in the internal examination system, the teacher who teaches a course has to examine

the students. There can be nothing out of course in his papers. He has to show all the answer-books to the students and each student has a right to know why his marks have been deducted. In fact it is in these discussions that students know their errors and learning takes place. In fact in this system, every student can examine others answer-books, so that no teacher can afford to be unfair. Further, if a grading system is adopted, so that any unfair advantage to one set of students will harm another set of students, there will be enough check in the system. In fact all over the world, this open system prevails and there have been no problems. In India also, this system has worked well in IITs, agricultural universities, many post-graduate departments, but this open examination system is resisted by vested interests who get a lot of money and privileges from the present secrecy system. In the open system, the examination system is decentralised and management of the system becomes easy and it can inspire faith and confidence.

Our Ph.D. programmes have suffered heavily from this veil of secrecy. Here a supervisor has just to find a few convenient examiners and then he can produce Ph.D.s. on a large scale. There are hundreds of theses from which no publication has ever come out. There are many theses which duplicate matter contained in other theses, but nothing is known because of secrecy. It is true that a copy of the thesis is deposited in the university library, but this thesis copy is not easily accessible to other groups in the country. Many examiners examine theses which are not in their fields of specialisation and then report simply summary of the thesis in ten lines and recommend the award of the degree. These reports are not always made available. The name of examiners are kept secret. Very often the viva voce examination is behind closed doors. If the questions asked and the answers given are tape-recorded, they would reveal the true state of affairs. In many countries all theses are available from a central agency, the names of the examiners are printed there and if an unworthy thesis has been approved, the examiner can be in trouble. At the Ph.D. level, everything has to be open. There can be no secrecy in the search for truth. The misuse of powers by vested interests will be reduced and the standards of Ph.D. programmes will rise.

The evaluation of teachers is again shrouded in a great deal of secrecy. Few universities have laid down criteria in detail and announced these to teachers in advance except the criteria of high academic and

\*Indian Institute of Technology, Kanpur.

research qualification. In other countries, there may be a five to twenty page document detailing what the university expects of teachers in different ranks and what they should do for promotion. The selection committee has to give reasons in writing for selecting or rejecting a candidate in terms of this document. There is frankness in telling a teacher that he is not upto the mark. In our case the selection committee consists of some 'experts' and some 'internal' members. The selection committee has almost no guidelines, has not to give any reasons and in such a situation, it can be swayed by narrow considerations. This does not always happen. In fact in most cases, the decisions are fair, but there is no confidence. Most candidates believe more in the power of manipulation, than on their own merit. Decisions of selection committees lead to frustration, litigation and headaches for university administrations. Making the process more open will inspire great confidence. The criteria should be laid down in advance and should be same for all candidates. Discretion should be used, but reasons for the use of this discretion should be given.

There is no much evaluation of teaching by students or by anybody else. Students are not trusted for fairly evaluating teaching, but teachers are trusted for evaluating students because it is impartial and secret. There can always be evaluation by students, by peers and even by experts, but this is not done so that it remains a secret as to how good a teacher is. There is no means of knowing objectively even how often the classes are taken, how well the lectures are prepared, how the lectures are delivered and whether there is any innovation in the process. Teachers can engage in tuition on a large scale, but this is supposed to be an open secret. No efforts are made to discriminate between good teaching and bad teaching. This can lead to indifferent teaching. Management has to devise ways so that good teachers can be rewarded and there are disincentives for poor teaching and this decision should be based on objectively and clearly specified criteria. The lack of openness and objectivity makes the task of university management difficult.

There has to be an 'openness' in admissions. The names of all students admitted together with their marks and qualifications have to be announced regularly on notice boards and all records of admission should be open to inspection, so that there is no temptation for corruption in admissions. Whenever university managements have insisted on and enforced 'openness', they have reduced their problems. However, if an authority avoids 'openness' to oblige some persons, it invites trouble for itself.

There has also to be open evaluation of departments, colleges, institutions and universities according to well-

defined criteria. In most advanced countries, there are professional accreditation agencies which can disaccredit a course. They can stop a department from offering a Ph.D. programme or permit a new department to open it. However their reports are all open and have to be based on facts and figures. There are also ratings of departments by professional organisations. In India standards have been going down in some institutions and the UGC is a helpless passive observer. This situation has to change.

There has to be an 'open' code of conduct for 'Chancellors' and 'Vice-Chancellors'. Chancellors, Education Ministers and Education Secretaries have always put on 'secret' pressures on Vice-Chancellors and university officials, but they have now felt emboldened to put these pressures openly. In one university, a Vice-Chancellor who refused to stop an enquiry into an admission examination scandal was dismissed and charge-sheeted, in another case, the Chancellor, being possibly unhappy on one of his recommendations about an appointment not being accepted, turned down an important recommendation of the university senate. The appointment of many Vice-Chancellors has been blatantly made on narrow caste and political influence considerations and students' interests do not enter the calculations at all. Private managements of colleges dominated by politically influential persons can get away with any amount of corruption. The management of university becomes extremely difficult under these conditions. If the Chancellors and the Ministers have any complaint against a university, they should put it in writing. Every thing should be open and on record.

The Educational System is a noble enterprise. If students, teachers, parents, administrators, politicians are interested only in excellence of Education and do not have any vested interests of their own, the system can be made open, at least much more open than it is today and much less secretive than it is today.

It is a fact that the education systems in advanced countries are much more open than ours. Openness breeds trust, while secrecy breeds mistrust. It is in this sense that their systems are more healthy and robust. Half of our problems of management are arising due to lack of openness and trust. There is mistrust between Chancellors and Vice-Chancellors, between Vice-Chancellors and professors, between professors and students, between karamcharis and administrators and so on. Most of our energy is lost in every group trying to use the powers of secrecy to its advantage. The real management of the university system suffers. Mistrust in the educational system leads to mistrust in society. Of course mistrust in society is responsible for the mistrust within the educational system. Let us try to break the walls of mistrust and secrecy at both levels. □

# Priorities and Goals of Education

A.H. Doctor\*

It has been correctly said that education not only makes citizens, but nations. It was no mere coincidence that one of the most glorious periods of our past was also the period when we were famed for our centres of learning like Taxila and Nalanda. In like manner, the future of our country, the dream to become in the 21st century, a nation advanced in every sense of the term, will depend on the educational planning we do today; on the priorities and goals we determine today.

The priorities are obvious and writ large in several contemporary documents of significance such as the Ministry of Education's "Challenge of Education—A Policy Perspective" and the Seventh Plan.

The first priority is to provide free and compulsory elementary education to the relevant age group. This implies improving the quality of education at this level as also considerably increasing the outlay on elementary education. The Seventh Plan document rightly urges the Government to treat this as "a non-negotiable requirement".

The second priority is a relevant and purposive vocationalization at the secondary stage. The plan to vocationalize education must be closely linked to the country's development plan for the next two decades and be prepared by educational institutions in active collaboration with the industrial sector.

The third priority is the setting up of a new management system for greater autonomy, accountability and efficiency at the University stage. In case of higher education, the autonomy of educational institutions has to be made a fact of our academic life. It is a precondition for any positive change whether in respect of the structure of universities, modernizing the course content or improving standards.

We must move, in keeping with the requirements of the age, towards a new management system, which ensures greater public participation as well as autonomy, efficiency and accountability in our universities. Now, structuring and managing such an educational system implies that the educational pyramid has to be decentralized in the real sense of the term. Substance has to be lent to the slogan of "Planning from Below" by making it possible for urban and rural communities to plan and run educational programmes. An open, democratic, participatory process enables an educational planner to find the implementable quantum.

Coming, specifically, to the University Structure,

the aim should be to decentralize, both, within the University in favour of departments, and, within the University-system in favour of more autonomous colleges. The Departments of the University are the main operational units on the academic side. It is they who conduct teaching and research. It is therefore necessary to ensure that they are adequately staffed and organised for this purpose and given appropriate financial and administrative powers, commensurate to their teaching, learning and research requirements, which include, *inter alia*, the functions of arranging seminars, workshops, visits by outside scholars and the like.

Departments armed with such additional powers must necessarily be democratic and responsible in their functioning. The entire department under the Chairmanship of the Head of the Dept., should function as a kind of Managing Committee, which should meet atleast once at the beginning of each academic term to discuss the academic programme, laboratory and library requirements, to review research work in progress and to prepare new research projects.

By the operation of the democratic principle within the department (as within the University as a whole), is meant the acceptance of the principle that good ideas can originate at any level in the hierarchy. To attach importance only to those ideas or proposals that emanate from persons higher in the hierarchy, may not only prove unhealthy from the point of view of staff morale, but would also be considered out of place in an institution where all ideas and proposals are expected to be objectively evaluated on their intrinsic merit.

Just as within the University, decentralization should be in favour of departments; within the University-system, the endeavour should be to establish autonomous colleges. Such a status could be conferred on colleges seeking to provide new, development and job-oriented courses and which, for this purpose are willing to employ suitably trained teachers and purchase the required equipment. Such a status would not only facilitate the introduction of new courses but also encourage colleges to experiment in teaching new courses on a continuing basis. In this regard, it is worth noting that in Europe and the USA the phenomenon of affiliated colleges is conspicuous by its absence. In our own country, as the Policy Perspective paper notes, "It is doubtful if the IITs and a number of other institutions would have succeeded in their thrust for excellence had they been tied to the apron strings of the mother Universities."

\*Department of Political Science, Goa University.

Turning our attention from priorities to the goals or objectives of University education, the first objective of education especially in the modern age should be to socialize the individual by making him develop roots in the tradition and culture of the society and country to which he belongs. This is necessary because even in bringing about change you have to be a part of the system in which you wish to bring about the change. Otherwise there is every danger of your destroying the system, or, of your looking upon man as a means and not an end in himself. Here it is important to bear in mind the conception of human personality that we cherish and wish to develop through our educational system viz., whether we wish to look upon the individual merely as a means to the greater glory of the nation and to be so used by the Government of the day, or, whether we wish to look upon him also as an integral, self-sufficient moral unit. I would think that all institutions—social, economic, political and especially educational—derive their sanction ultimately from the degree to which they promote the growth of the individual's personality and the flowering of its creative potentialities.

One is here tempted to mention an experiment the Andhra Pradesh Open University intends to embark on with effect from this academic year. With a view to giving the maximum possible scope for encouraging and tapping creative talent wherever it may lie in society, the Andhra Pradesh Open University proposes to introduce a new unique Ph.D. programme in Social Sciences, English and Telugu, under which, a person having no formal qualifications but having published research oriented articles in specified journals would be given admission to the Ph. D. course.

It would also be relevant here to refer to the National Service Scheme prepared by the Department of Human Resource Development, Government of India, and to which even the policy perspective paper makes pointed reference. The objective of the scheme according to the Ministry handout is "development of the personality of students through community service".

The scheme is ideally suited to meet the goal just mentioned, viz., socializing the student by making him develop roots in the tradition and culture of the society and country to which he belongs. The various services listed by the Ministry under the National Services Scheme, such as environment enrichment and conservation, health and nutrition programmes, conducting adult literacy and adult education classes, coaching students from the weaker sections, and relief work during national calamities like cyclones and floods, are ideally suited, not only to build discipline and character but also

to promote the values of nationalism, socialism, secularism and national integration.

The second objective of university education should be to equip the individual with basic information and intellectual tools that would help him find his way through the plethora of experience that life is. Our education must aim at equipping our young with the basic knowledge, intellectual skills, and norms, that would enable them to order the variegated experience of life into a meaningful whole.

This objective would imply that teachers follow the Socratic method of provoking the student into thinking for himself, into examining all the relevant evidence and alternative possibilities and then only arriving at his own conclusion. This is necessary because acquiring knowledge beyond the stage of data gathering is essentially a deductive process. Our education system must not



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therefore merely aim to stuff information into the heads of our students, but rather seek to inculcate in them a sense of intellectual discipline and a concern for ideas.

Since contemporary thinking is that universities should seek to equip the largest number of people in society with the basic knowledge and intellectual tools to face life and its challenges meaningfully, both in the west and in our country a lot of emphasis has come to be placed on the concept of "Open University"— and "Open Education". An open university is open with regard to several aspects of higher education, "it is open with regard to people, places, methods and ideas", as Lord Crowther, Chancellor of Open University of UK stated in his inaugural address in 1969; and ideally there are no minimum qualifications of getting admission in the Open University.

Although the Government's concern for encouragement to open education is to be welcomed as an egalitarian measure, we must be on our guard, lest it should end up creating a new cleavage in the system of higher education, with one system—the system of walled education meant for the elite: while the other system—the system of open education — meant for the underprivi-

leged unable to cope with the requirements of the regular university.

The third and last objective of university education could be stated to be the training of students to earn their livelihood in conformity with the norms of economic conduct accepted by the community of which they are a part. Speaking in a lighter vein, we may say, that if the community's norms permit terrorism or earning money by smuggling, an honest educational system could as well teach desirous students these arts. But if the community's norms insist on peaceful conduct and on honest effort, then the educational system must impart skills as would enable its products to make an honest living. Unfortunately, the problem that educators in our country face, arises from the fact that while society professes one set of values or norms; in practice it adheres to another and contrary set of norms.

To conclude, while reflecting on the priorities and goals (or objectives) of education, it is necessary for us to adopt a "holistic approach". Our aim should be to integrate the various levels of education, elementary, secondary and higher as well as to blend science with culture. Science here broadly standing for systematised knowledge, technology and skills, culture for our belief systems, moral values, attitudes and orientations. □

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# National Conference on Distance Education

The Association of Indian Universities will organise in collaboration with the Indira Gandhi National Open University and Gujarat University a National Conference on Distance Education on 9th and 10th November, 1986.

Despite a phenomenal increase in educational facilities since independence, the Indian education system is not able to cope with the rising number of students who aspire for admission every year. Higher education system is confronted with enormous shortages of teachers, buildings and equipment. These shortages are likely to mount further because of our inability to raise matching resources. This is true not only of India but of all the countries the world over.

Distance education is regarded as an effective alternative to the formal system and most of the countries are making increasing use of the method of teaching at a distance. This method denotes the application of multi-media approach to the entire teaching-learning process. It is thought that distance education will provide solutions to the educational problems of spread of knowledge and skills as well as in raising the general level of education of the masses. Introduction of correspondence courses by several universities is to be seen in this context. Establishment of the Indira Gandhi National Open University and the fact that many State Governments have either established open universities or are planning to do so is only pointer to the popularity and acceptability of the concept of distance education. The National Conference on Distance Education is being organised in recognition of the need for formulating appropriate policies and strategies to lend meaning and substance to the concept of distance education. The focus of the Conference will be on the following themes :

- (a) Concept of distance education
- (b) Forms of distance education
- (c) Course designing and preparation
- (d) Role of media in distance education
- (e) Financing of distance education
- (f) Student support services
- (g) Evaluation methodology

## Programme

The Conference will be conducted under four panels

as per following programme. It will conclude with a plenary session.

### November 9, 1986

Session I (Inaugural)	10.30 a.m. - 11.30 a.m.
Session II	11.45 a.m. - 1.15 p.m.
Session III	2.30 p.m. - 5.00 p.m.

### November 10, 1986

Session IV (Plenary)	10.00 a.m. - 12.00 noon
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## Participation

Delegates from various universities and other institutions of distance education (including correspondence courses) are invited to participate. Governmental and private organisations in the fields of electronics, space information, data processing and satellite educational programmes may also participate. Such participation can be either in terms of presenting a paper or demonstration of educational technologies, aids and other learning devices developed in India and abroad.

## Exhibition

It is proposed to hold an exhibition of books, journals, equipment for Video, TV and Computer aided instruction and demonstrations of new technologies during the Conference. Entries are invited for the exhibition.

## Venue

The venue of the Conference and the exhibition will be the Gujarat University, Ahmedabad.

## Language

The official language of the Conference will be English.

## Papers

The papers, in duplicate, (accompanied by an abstract of about 300 words) not exceeding 3000 words, should be sent latest by September 1, 1986 to the Conveners, who could also be contacted for further details.

## Conveners

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# Asia-Pacific Information Network in Social Sciences

A regional meeting of experts to develop an Asian Network of Social Science Information and Documentation Centres was held in Bangkok on 12-16 May, 1986 under the auspices of the Association of Asian Social Science Research Councils (AASSREC) and the Unesco. Experts from 17 countries in the Asia and Pacific region attended the meeting. At this meeting the Asia-Pacific Information Network in Social Sciences (APINESS) was launched.

In his inaugural address Dr. Makminan Makgiansar, Assistant Director General of Unesco, opined that the network will fill a fundamental void and provide social scientists of the region greater access to their colleagues' work.

Prof. Iqbal Narain, Member Secretary, Indian Council of Social Science Research, (ICSSR) and Secretary General, AASSREC, felt that the establishment of network will help disseminate information about accumulated contribution to study and research of the social science scholars in the region and would ultimately enrich the pool of universal knowledge.

Dr. Yogesh Atal, Unesco Regional Adviser, described the network as a mechanism for breaking information isolation.

Shri S.P. Agrawal, Director, National Social Science Documentation Centre (NASSDOC), New Delhi while presenting the country report drew attention to India's glorious past in pursuit of learning and preservation of knowledge through the tradition of 'Sruti' and 'Smriti'. He explained the role of ICSSR in the development of so-

cial science research and its utilisation.

The activities of the APINESS will be to link up the existing major social science libraries and documentation centres in the region to facilitate the exchange of knowledge. It will further encourage development of new information centres and clearing houses and assist in improving bibliographical control, indexing and abstracting services, producing directories and inventories and computerisation of the total documentation system.

To begin with NASSDOC will undertake the following activities within the network :

(a) Mail NASSDOC Research Information Series publications to National Contact Points.

- (b). Compile and update directory of APINESS participants,
- (c) Provide regional dimension to professional training courses which are planned to be started by NASSDOC, and
- (d) Distribute (repost in India) among Indian participating centres and other institutions, publications received from Unesco Regional Office and APINESS National Contact Groups.

The meeting elected the following office-bearers: Mr. Rahim Zain, Director General, Socio-Economic Research Unit, Prime Minister's Department, Govt. of Malaysia, Chairman; Mr. S.P. Agrawal (India), Vice-Chairman; Dr. Muhammad Aslam Khan (Pakistan), Vice-Chairman; and John Gullacher (New Zealand), Rapporteur General.

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**M.K. Gangajaliwale**  
**REGISTRAR**

# CALENDAR OF EVENTS

Proposed Dates of the Event	Title	Objective	Name of the Organising Department	Name of the Organising Secretary/Officer to be contacted
August, 1986	Seminar on Adult Education and Libraries	Topics to be covered are: (i) NAEP and Libraries; (ii) Public Libraries and Extension work; (iii) Public Libraries and Mass Communication; and (iv) Academic Libraries and Extra-Mural Activities	Jiwaji University, Gwalior	Dr. S.M. Tripathi, Head, School of Studies in Library and Information Science, Jiwaji University, Gwalior.
September 13-15, 1986	National Solar Energy Convention 1986	To evaluate the current status and trends in solar energy studies; to evolve methodology for collaboration among researchers and industrialists; and to identify technologies for harnessing renewable energy sources	School of Environment and Natural Resources, Madurai Kamaraj University, Madurai	Prof. T. M. Haridasan, Organising Secretary, National Solar Energy Convention—1986 School of Energy, Environment and National Resources, Madurai Kamaraj University, Madurai
October 1-4, 1986	Third National Conference on Women's Studies	To promote the development of Women's Studies in India by providing a forum for interaction amongst individuals, institutions and organisations engaged in teaching, research or action for women's development.	Indian Association for Women's Studies, New Delhi in collaboration with Panjab University, Chandigarh	Dr. Lucy Jacob, General Secretary, IAWS, L-3-D, University Campus, Jaipur
October, 5-7, 1986.	International Seminar on Gandhiji and Contemporary Ideologies regarding Freedom, Peace and Equality.	To evaluate the Contemporary Ideologies regarding Freedom, Peace and Equality in the context of Gandhiji's Contribution.	Institute of Gandhian Thought and Peace Studies, Allahabad University in collaboration with the Indian Society for Gandhian Studies.	Dr. J.S. Mathur, Director and Dr. O.N. Srivastava, Associate Director, Gandhi Bhawan, Allahabad University, Allahabad.
November 9-10, 1986	National Conference on Distance Education	Topics proposed to be covered are: (i) Concept of Distance Education; (ii) Forms of Distance Education; (iii) Course Designing and Preparations; (iv) Role of Media in Distance Education; (v) Financing of Distance Education; (vi) Student Support Services; (vii) Evaluation Methodology.	Association of Indian Universities, New Delhi; Indira Gandhi National Open University, New Delhi; and Gujarat University, Ahmedabad	Prof. B. N. Koul, Indira Gandhi National Open University, K-76, Hauz Khas, New Delhi. Mr. M.M. Ansari, Project Director (Research), Association of Indian Universities, 16 Kotla Marg, New Delhi
December 26-28, 1986	Seventh National Congress of Parasitology	Prophylaxis and control of parasitic diseases of man and his biosphere	Department of Bioscience, Ravishankar University, Raipur, in collaboration with Indian Societies for Parasitology	Dr. S.M. Agarwal (Organising Secretary) Vice-Chancellor, Ravishankar University, Raipur
January 6-9, 1987	International Seminar on Cement and Allied Building Materials	Exchange of knowledge and experience to assist the cement and building materials industries in their technological growth and development through regional and international co-operation and collaboration.	National Council for Cement and Building Materials, New Delhi	The Organising Secretary, National Council for Cement and Building Materials, M-10, South Extension Part II, Ring Road, New Delhi

# Psychological Traditions in India

An all India U.G.C. Summer Institute on 'Psychological Traditions in India' was held at Gurukul Kangri Vishwavidyalaya, Hardwar from June 25 to July 9, 1986, with the following objectives:

- (i) to acquaint Psychology teachers and research scholars regarding various landmarks and achievements of Indian Psychology;
- (ii) to provide a forum for discussion on various aspects of Indian Psychology—the teaching of which is very scanty in Indian universities; and
- (iii) to compile and disseminate material on Indian Psychology.

Learned resource persons expressed their views on Psychological Traditions in India. It was felt and established that old Indian scriptures do possess detailed Psychological concepts and principles. To explore this literature, intensive exploratory library work was done by the participants and each one of them presented an individual project on the work done by him. This was a very good starting point in this new venture and much is expected in this direction from such institutes. Gurukul Kangri Vishwavidyalaya, with a long heritage of Vedic learning, was the most appropriate place for such a work and its lead in this pursuit was highly appreciated.

Highlights of the institute included lectures on such topics as Psychology in Vedas, Vedic origin of psychotherapy, Yoga typology, Psychology in Geeta, Psychology in Tamil literature, Psychology, Science and Religion, Parapsychology, Breathology, Psychology in Jain Philosophy, Seven bodies and their dream types, etc.

The institute was directed by Professor H.G. Singh and Dr. Satyavarat Siddhantlankar, Dr. R.N. Safaya, Dr. S.P. Atrey, Dr. A.K. Sinha, Professor R.M. Loomba, Dr. V.P. Upadhyaya and Dr. Jai Dev acted as resource persons.

Dr. A.K. Sinha, who presided over the closing ceremony, emphasised the need of extensive studies in Psychological heritage of India. Certificates for attendance at the institute were awarded to the participants.

## Telugu Akademi to Offer MPhil, PhD Courses

The Telugu Akademi proposes to introduce, in collaboration with the Andhra Pradesh Open University, MPhil, PhD and Diploma in Journalism Courses in Telugu and courses in Telugu Translations to build up additional cadres of writers and translators. Highlighting the salient features of the Akademi, the State Education Minister, Mr. Muddu Krishnama Naidu said that the objective of the research work being undertaken by the Akademi was to standardise the terms and words used in different regions for the same meaning or the context and to evolve terms and words which could be commonly used in all Indian languages in different disciplines. This was being done by adopting terminology through collection, compilation, evaluation, coinage and equivalence.

The Akademi has so far standardised 40,000 words and terms for postgraduate level and 80,000 words and terms for degree and intermediate levels. The Akademi has already published 60 titles for Intermediate, 296 titles for degree and two titles for postgraduate

courses in addition to 199 other books.

## Bihar to Review PG Centres

The Bihar State Government is reported to have decided to set up a Postgraduate Teaching Review Committee to check the rapid growth of PG Centres in colleges and universities in the State. This decision was taken at a meeting of the Vice-Chancellors of the Universities convened by the State Education Minister, Mr. L.N. Jha, in Patna recently. Among those who attended the meeting were Prof. Devendra Nath Sharma, Chairman, Inter-University Board, Dr. K.N. Prasad, VC, Patna University, Mrs. Lalita Singh, VC, Bihar University, Mr. Iqbal Bahadur Singh, VC, Bhagalpur University, Dr. Chetkar Jha, VC, L.N. Mithila University and Mr. Inayat Ahmad, VC, Magadh University.

Pending report of the review committee, which will examine the problems of the existing PG centres, no new centres would be allowed to be opened.

## New Building for Biochemical Engg Research Centre

Prof. R.N. Dogra, Founder Director and former Chairman, Board of Governors of the Indian Institute of Technology, Delhi, laid the foundation stone of the Biochemical Engineering Research Centre Extension-cum-Demonstration Facility for Bioconversion of Lingocellulose to Ethanol on 17 July, 1986.

Biochemical Engineering Research Centre at Indian Institute of Technology, Delhi is expanding its activities to augment the manpower development facility in the areas of Biochemical Engineering and Biotechnology in the country, including appropriate research and

development pursuit built into the academic programme. The Centre has received partial fund support from Department of Biotechnology, Government of India for this purpose and a large proposal to fund these activities is in active stage of approval by UNDP.

Further, based on the Centre's R and D activities, a Demonstration facility for biomass refining and bioconversion of lignocellulosic residues to ethanol is being established by the financial assistance of DNES. Useful engineering data will be collected on this demonstration facility to enable a realistic techno-economic evaluation of the bioconversion processes developed at the Centre.

### **Computer Science Applications Course at Burdwan**

The Burdwan University proposes to start a post-B.Sc. computer science applications course at the national level from the current academic session. The University Grants Commission has already sanctioned a sum of Rs. 1.15 lakhs besides providing for one Reader and two Lecturers for a period of five years. A computer centre is also proposed to be opened and an initial sum of Rs. 10 lakhs has also been made available to the University for the purpose.

### **Refresher Course in Economics**

A Refresher Course in Economics for the college teachers of the North-Eastern region was organised by the Department of Economics, Gauhati University, recently. The objective of the Course was to acquaint the college teachers of this region with the new topics incorporated in the recently introduced Three Year Degree Course of Economics. Besides, the Course

contents of the programme included some of the modern and dynamic fields of economics essential to raise the teaching ability of the college teachers

30 teachers of Economics of colleges from the different parts of the North-Eastern region and 10 teachers of Economics of the local colleges participated in the Course.

Dr. K. Alam, Professor and Head of the Department of Economics, Gauhati University, was the Director of the Course.

### **Asiatic Society Library**

The Maharashtra Government is contemplating to take over the Central library, at present being managed by the Asiatic Society of India. It will be located at the Post-

graduate Campus of the University of Bombay at Kalina. This step is reportedly being taken to ensure proper storage of vast collection of books and documents.

### **Sophisticated Equipment for Burdwan Varsity**

UGC has sanctioned a sum of Rs. 26 lakhs for installation of sophisticated scientific equipment like NMR Spectrometer, scanning electron microscope and liquid nitrogen plant at the University's unit for central instrumentation facility, according to Dr. S.P. Banerjee, Vice-Chancellor, Burdwan University. This would solve the instrumentation problems of all the science departments and would cater to the needs of the scholars and faculty members.

## **News from Agril. Varsities**

### **National Workshop on Solar Energy Utilization**

Dr. Sukhdev Singh, Vice-Chancellor of the Punjab Agricultural University inaugurated a National Workshop on Solar Energy Utilization in Ludhiana recently. Dr. Singh stressed the importance of solar energy in the country and wanted the Solar Energy Scientists and Engineers to identify specializations and smaller components so that very basic and fundamental work of development is undertaken.

Sharing his experience in the popularization of solar gadgets like solar water heaters and solar cookers, he wanted to know why these devices were not catching up on a large scale. He wanted realistic economic studies to pin point the definite cost advantages of using these devices. He also pointed out various solar energy technolo-

gies which needed research and development work in some of the technologies like production of mechanical power from solar energy and solar refrigeration.

He lauded the efforts of the Centre of Advanced Studies on Energy Management in Agriculture and School of Energy Studies for Agriculture of the PAU in organizing such workshops and promoting and disseminating advance knowledge in these non-conventional energy sources.

Professor A.P. Bhatnagar, Director, School of Energy Studies for Agriculture in his welcome address explained the objectives of these workshops and listed the various programmes undertaken, which included the organization of National Seminars and Workshops on Energy, Energy Conservation, Micro Processor Application in Energy Controls, Biomass

Conversion Technologies and now this Solar Energy Utilization Workshop. Various research activities like development of crop waste-based gasifier; energy audit surveys in the villages, energy requirements in sugar mills and poultry production and lately a very specialised project on Collection, Storage and Handling of Paddy Straw for 10 MW Power Plant have been completed. The School also runs a Ph.D. programme in Energy Science and Technology which covers various streams like Engineering, Microbiology, Biochemistry and Economics.

Delegates from all over the country participated in the deliberations of the 10-day national workshop.

### New Sesamum Variety Released

→ A new variety of sesamum TC-289 developed at the Plant Breeding Department of the Punjab Agricultural University has been released for general cultivation by the State Variety Release Committee recently.

TC-289 developed by hybridization from cross of Pb. Til No. 1 x EC 4619 has given on an average of 528 kg/ha as against 454 kg/ha of Pb. Til No. 1 which is 16% more. However, it recorded a highest yield of 713 kg/ha at one of the farms in Ropar district. The variety possess bolder seed size with a 1000-seed weight of 3.07g and it contains 51.6 per cent oil. The variety has better quality oil since it has 5% more linoleic acid, an essential fatty acid than Pb. Til No. 1. TC-289 was also recommended for minikit testing and pre-release seed multiplication throughout the country by the All India Workshop held at Punjabrao Krishi Vidya Peeth, Akola, in April, 1985.

TC-289 should be sown in good water condition in the last week of June to first fortnight of July, in lines 30 cm apart and 4-5 cm deep. Use only 2.5 kg seed per ha. Apply

35 kg N per acre. Protect the crop from leaf roller and hairy caterpillar as per control measures given in the Package of Practices for Kharif crops.

## AIU News

### Standing Committee to Meet at Madurai

The 209th meeting of the Standing Committee of the Association of Indian Universities will be held at Madurai Kamaraj University on 26th July, 1986. This session of the Standing Committee promises to be rather hectic as a number of important proposals and reports will come up for its consideration.

Amongst other things, two important items that are likely to come up for the consideration of the Standing Committee are a proposal of the Indo-US Book Bank for supplying technical books to Indian institutions; and the offer to host the conference of the executive heads of the Association of Commonwealth Universities scheduled for 1991. Requests for the membership of the Association from Thapar Institute of Engineering and Technology, Patiala and International Institute for Population Sciences, Bombay (Deemed Universities) will come up for consideration together with the reports of the visiting committees in respect of Bharathiar University, Coimbatore and Chandra Shekhar Azad University of Agriculture and Technology, Kanpur which were earlier enrolled as provisional members of the Association.

The Standing Committee will also have for its deliberations the reports of the AIU Sub-Committees on 'Working of Autonomous Colleges', 'Task Force on Distance

Education', 'Exchange of Faculty among Universities', 'All India University Council', 'Co-curricular Activities, NCC, Physical Education and Sports etc. in Universities and Colleges' and 'Problems of Deemed Universities'. The minutes of the meeting of the AIU Cultural Committee held on 15th July, 1986 will also come up for consideration and approval of the Standing Committee. The Standing Committee will also have for its consideration and approval a proposal regarding Research in Educational Testing Technology which was recommended by the Research Committee at its meeting held on 14th March, 1986.

#### HIMACHAL PRADESH UNIVERSITY

Recruitment Branch

Advertisement No. 4/86

#### CORRIGENDUM

Please read as under after the posts of Lecturers in the H.P. University Evening College, advertised vide advertisement No. 3/86 dated 8-7-1986.

"Other things being equal, preference will be given to the candidates belonging to the Scheduled Castes/Scheduled Tribes for appointment to the posts of Lecturers".

A.R. Chauhan  
REGISTRAR

# Sports News

## National Welfare Fund for Sportspersons

The Government has constituted a General Committee for the National Welfare Fund for sportspersons with the Minister of State for Sports and Youth Affairs as its Chairman. The other members of the committee are : Secretary to the Government of India, Department of Youth Affairs and Sports; Chairman, Society for the National Institute of Physical Education and Sports (SNIPES); President, Indian Olympic Association; Director General, Sports Authority of India; President, Federation of Indian Chambers of Commerce and Industry; three veteran Sportspersons to be nominated by Central Government; five representatives of State Sports Councils/State Governments to be nominated by the Central Government; five representatives of the National Sports federations to be nominated by the Central Government; Director General, Netaji Subhash National Institute of Sports, Patiala and Joint Secretary, Department of Youth Affairs and Sports.

There would also be a nominated member of the committee who shall hold office for a period of 3 years from the date of his nomination unless renominated at the expiry of that period. The main objectives of the above committee are to provide suitable financial assistance to sportspersons injured during the period of their training. It would provide suitable assistance to the outstanding sportspersons who bring glory to the country. The fund will also be provided by way of medical treatment or through grant of monthly pension or both.

A lumpsum financial assistance to a sportsperson or his family may be granted under the schemes :

- (i) in case of sustaining a fatal injury during training for, or participation in, an international competition, subject to a maximum of Rs. 1 lakh;
- (ii) in the case of the sportsperson sustaining injury, other than a fatal injury, subject to a maximum of Rs. 25,000/- provided that the assistance shall in no case be less than Rs. 2,000/-;
- (iii) in the case of an outstanding sportsperson who is permanently or indefinitely incapacitated for service, or otherwise, of a sum not exceeding Rs. 700/- p.m.;
- (iv) a lump sum financial assistance, not exceeding Rs. 25,000/- in each case, may also be provided to the fami-

lies of outstanding sports persons in indigent circumstances;

- (v) a financial assistance not exceeding Rs. 10,000/- may also be provided for medical treatment of an outstanding sportsmen in indigent circumstances. Provided that an outstanding sportsperson getting benefits under any other scheme like insurance scheme, etc. may be provided assistance not exceeding Rs. 2,000/- as an immediate relief for medical help; and
- (vi) the Committee shall also be at liberty to provide financial assistance in special cases and for a limited period to enable an outstanding sportsperson, who is not employed, to look after his day to day expenses including diet. The Committee shall also have the power to extend ad hoc financial assistance to sportspersons in exceptional cases for participation in the national championships or international competitions for meeting expenses relating to his actual participation including the provision of kit or sports equipments.

## News from Abroad

### FLYING WINDMILL

A flying windmill, designed to fly like a kite and generate energy at the same time, is undergoing field tests in Australia. The University of Sydney has designed an enlarged version of the Gyromill, which was successfully tested behind a car last year. Gyromill II is designed to fly like a kite while a helicopter-type apparatus spins in the wind, generating electricity, which is then

fed down along lines attached to the tether wires, according to the team leader, Associate Professor Bryan Roberts of the University's Department of Mechanical Engineering.

Professor Roberts said the Gyromill could ultimately provide power for remote areas such as Antarctica by hovering about 300m (1000ft) above the snow drifts to provide a

pollution-free source of energy. A similar hovering device could also carry television cameras to give pictures of ice pack formation as an aid to ship navigation, he added.

If the wind dropped below the minimum necessary to generate electricity, power could be sent up the power lines to turn the rotor blades and keep the device aloft like a helicopter until the wind picked up or the machine was winched down. Professor Roberts said Gyromill II could generate up to 3 kW (4 hp) in suitable winds. Gyromill II weighs 20 kg (44 lb) and has twin contra-rotating rotors, each 4m (13 ft) in diameter. The craft can be tilted back up to 30 or 40 degrees to the wind, depending on conditions. The rotors can rotate at upto 700 revolutions a minute.

## More Rice from Less Water

Australian researchers are examining the possibility of growing more rice although using less water. Rice varieties from Brazil, Japan, the Republic of Korea, the United States and the Philippines are being tested, and negotiations are under way to import seeds from Thailand. Research is being undertaken at the University of Queensland's Redland Bay research farm under the supervision of Dr. Shun Fukai, senior lecturer at the University's Department of Agriculture. Dr. Fukai said that rice crops are commonly grown in paddies under flooded conditions, but it is estimated that about half the world's rice crops experience water shortages at some stage of growth. In addi-

tion, many varieties of upland rice are grown in areas where it is impossible to produce paddy rice, but these varieties only produce about half the yield of paddy rice grown under ideal conditions.

There would be many benefits if varieties could be developed which could produce high grain yields with limited amounts of water. One of the problems with upland rice varieties was that they put too much energy into plant growth and not enough into grain production. It had been possible to reverse this growth feature in other crops and it should be possible in rice. One of the main areas of research involved investigation of root development in the plants, as this was a key factor in determining success or failure of rice varieties in a dry environment. □

## Forthcoming . . . .

### Biographies of Indian Scientists

Enakshi Chatterjee

Intended as a supplementary reader for the tertiary or college-level, this anthology discusses the lives and times of Indian scientists who did pioneering work in the field of Physics, Chemistry, Life-sciences, atomic research and natural sciences.

### Organising Villagers for Self-reliance

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A penetrating sociological study of a Bangladesh village based on a programme of action research on public health, this engrossing monograph successfully portrays the various aspects of reformation in South and Southeast Asia through an intelligent and sympathetic approach.

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# AIU Library

Established in 1965, the AIU Library has acquired over the years a valuable collection of books and documents on Higher Education. Among the topics prominently represented are Educational Sociology, Educational Planning, Educational Administration, Teaching & Teachers' Training, Examinations, Economics of Education and Country Studies. Developing fields of Adult Education, Continuing Education and Distance Education, and Educational Technology are also well stocked. The Library is particularly strong in its collection of reports whether they are on the setting up of different universities or on the state of Higher Education. Files of Annual Reports of different universities are also maintained. Readers are kept informed of the latest acquisitions through our column 'Additions to AIU Library'.

The Library also receives about a 100 periodical titles on Higher Education. All these are indexed regularly and a select list appears every month as 'Current Documentation in Education'.

Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month' while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

Research scholars and students of education are welcome to use these resources. The Library is open from 9-30 a.m. to 5-30 p.m. Monday through Friday. Access can also be had through Inter library loan for which requisition must be made through your Librarian.

## THESES OF THE MONTH

### A list of Doctoral Theses Accepted by Indian Universities

#### BIOLOGICAL SCIENCES

##### Anthropology

1. Muharana, Bibhuti Bhushan. *Stimulants and barriers to economic development of the village Baramunda within the capital city, Bhubaneswar.* Utkal.

##### Microbiology

1. Parjit Kaur. *Characterization of genetic, biochemical and immunological changes in silver ion induced bacterial mutants.* Panjab.
2. Silas Ebenezer, A. *Studies on the ecology and productivity of saline lagoon.* CUSAT, Cochin.
3. Suseelan, C. *Studies on the deep-sea prawns off South-West Coast of India.* CUSAT, Cochin.

##### Biochemistry

1. Kaul, Phool Pyaree. *Studies on metabolism of chlorinated hydrocarbon insecticides in relation to certain endocrine control.* Nagpur.
2. Sanoj Kumar. *Studies on T-2 toxin induced metabolic changes in proteins, lipids and nucleic acids in rats.* HAU.

##### Botany

1. Cheluvaiah, M.C. *A survey of the anatomy of the Hibbertia leaf in relation to the taxonomy of the genus.* Bangalore.
2. Mishra, Ravi Prakash. *Aero-biological studies with special reference to pollen grains and fungal spores of Jabalpur.* Durgavati.

3. Parminder Kaur. *Studies on developmental changes during grain maturity and precocious seed germination in wheat genotypes.* PAU.

4. Perbodh Chander. *Effect of phenols on biochemical during fruit development in mash, Vigna mungo (L.)* PAU.

5. Roymon, M.G. *Studies on the biology of actinomycetes from Raipuri and its surroundings.* Ravishankar.

6. Sarkar, Surajit. *Analysis of the nature and growth of mutagen treated callus and single cells of Dioscorea species in vitro.* Calcutta.

7. Shrivastava, Mahesh Kumar. *Growth analysis of divergent genotypes of soyabean, Glycine max. (L) Merrill in relation to productivity.* Durgavati.

8. Venugopal, P.K. *Effect of indole-3-acetic acid and gibberellic acid 3 on development and differentiation of cambium in Tectona grandis L.F.* Calicut.

##### Zoology

1. Aggarwal, Pratibha. *A study of contact dermatitis in Indore Region.* Devi Ahilya.

2. Bengeri, Krishna Venkatesh. *Studies on the effects of industrial pollutants to some fresh water fishes.* Karnataka.

3. Ghosh, Pijushkanti. *Studies on some aspects of neurosecretion in female tiger prawn, Penaeus, monodon Fab.* Calcutta.

4. Krishnan, Nirupa. *Physiological energetics of food conversion in a channid fish.* Bangalore.

5. Maini, Harminder. *Studies on the gametogenesis in some species of arachnids.* Durgavati.

6. Mohanty, Swapna. *Effect of thiourea on the reproductive physiology of gundhubug, Leptocerisa varicornis Fabr. (Hemiptera: Coreidae).* Utkal.

7. Ramachandru, Anand. *Studies on cercariae and seasonal infection pathophysiology and immunobiology of snail hosts*. Ravi-shaukar.

8. Ranjit Singh. *Development, growth and reproductive biology of culturable fishes in ponds fertilized with organic wastes*. PAU.

9. Shrivastava, Kamlesh Kumar. *Studies on insect pest complex of soybean, Glycine max L with reference to Sagar Region*. HS Gour.

#### Agriculture

1. Behniwal, Mukand Singh. *Studies on pathogenic variability and durable resistance to red rot of sugarcane caused by Colletotrichum falcatum Weni*. HAU.

2. Bhan, Surinder. *Studies on the repeated application of fertilizer alone and in combination with herbicides in plum Cv. santa rosa*. HP Krishi.

3. Brar, Gurdarshan Singh. *Water relation photosynthesis and yield responses of wheat to periodic soil water deficit*. IIT, Kharagpur.

4. Brijinder Singh. *Effect on growth, yield and quality of oat, Avena sativa Linn. and berseem, Terifolium alexandrinum Juslén grown in pure and mixed stands at varying levels of nitrogen and phosphorus*. HP Krishi.

5. Chougule, Jinendra Dhanapal. *Sugarcane, Saccharum officinarum Linn. productivity as affected by different agronomic practices*. MP Krishi.

6. Gian Chand. *Studies on incidence pathogenicity, biology and control of important nematode species associated with peach*. HP Krishi.

7. Gupta, Purushotam Das. *Influence of tool design and tillage system parameters on performance of wide cutting blades dryland farming*. IIT, Kharagpur.

8. Krishna Kumar. *Energy from agricultural wastes and byproducts*. IIT, Kharagpur.

9. Lakshmana Rao, P.V. *Induction and nutrition of diploid and haploid callus and plantlet regeneration of three tropical legume trees*. IIT, Kharagpur.

10. Misra, Rameshwar Prasad. *Community storage of food grains : An O.R. approach*. IIT, Kharagpur.

11. Mohanty, Dhruba Charan. *Germplasm evaluation and genetic improvement in ginger*. OUAT.

12. Nagi, Parminder Singh. *Response to selection through honeycomb design under competitive and non-competitive situations in Gossypium arboreum L*. PAU.

13. Parihar, Shatrughna Singh. *Integrated management of water, fertilizer and sowing time for wheat, mustard and chickpea in humid subtropics*. IIT, Kharagpur.

14. Philip, Babu M. *Nuclear polyhedrosis of Opisina arenosella WLK (Nephantis serinopa MEYR) CRYPTOPHASIDAE : LEPIDOPTERA) and its utility for the control of the pest*. Kerala Agrl.

15. Sahu, Narendra Nath. *Development of low cost and portable modules for efficient water use and management*. IIT, Kharagpur.

16. Satish, S. *An econometric study of the marketing of cotton in the Raichur District, Karnataka*. IIT, Kharagpur.

17. Sharma, Sandeep Kumar. *Studies on economic threshold and estimation of damage of Heliothis armigera Hubner on chickpea*. JN Krishi.

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Cowan, John and Harding, Alan G. *A logical model for curriculum development*. *British J Ednl Tech* 17(2), 1986, 103-9.

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## AWARDS

**Rs. 25,000/-**

A Cash Award of Rs. 15,000/- to an institution and Rs. 10,000/- to an individual for outstanding contribution towards making out a case to motivating the Government to introduce :

**BACHELOR OF SPORTS DEGREE**  
course in the streams of Sports/Games.

A stimulating campaign for employment opportunity in the field of Sports/Games may be built up in any language and through any conceivable media.

Last date for submission of nominations is December 31, 1986. Details may be had from :

Jugal Srimal  
Director  
Nehru Children's Museum  
Calcutta-700 020

## CLASSIFIED ADVERTISEMENTS

### PANJAB UNIVERSITY

CHANDIGARH

Advertisement No. 8/86

Applications are invited for one post of Principal Scientific Officer in the University Service Instrumentation Centre, in the pay-scale of Rs. 1500-60-1800-100-2000 (UGC Scale), so as to reach the Registrar, Panjab University, Chandigarh, by 11-8-1986 alongwith postal order for Rs. 10/-.

#### Qualifications

(i) B.E. degree in Electronics or M.Sc. in Physics with atleast 2nd division and specialisation in Electronics.

(ii) Atleast five years experience in Microprocessor technology at a senior level in a University, Research Institute or a reputed organisation.

#### Note

1. It is not obligatory on the part of the University to call all eligible persons for interview.

2. The Vice-Chancellor could place before the Selection Committee, names of suitable persons for its consideration alongwith applications received in response to the advertisement.

3. On the recommendations of the Selection Committee, the appointing authority can relax any qualifications or other conditions in the case of those considered eminently suitable by it.

4. The number of posts mentioned in the advertisement may change at the time of selection. The university reserves the right to increase/decrease the number of posts.

Persons already in service should route their applications through proper channel. They may, however, send one copy of their application (on the prescribed proforma) direct to the University. They will be allowed to present themselves for interview only on the production of 'No Objection Certificate' from their employers. Incomplete forms will not be considered. Forms received after the due date are liable to rejected unless the Vice-Chancellor condones the delay by a special order. Attested copies of certificates in support of qualifications be attached to the applications. Canvassing in any form will disqualify the candidates. Higher start to deserving candidates is admissible.

Application forms can be obtained from the Cashier, Panjab University, personally on payment of Rs. 2/- or by making a written request to the Deputy

Registrar (Essl.) Panjab University, Chandigarh, accompanied by a self addressed stamped envelope of  $23 \times 10$  cms. and a postal order of Rs. 2/- drawn in favour of the Registrar, Panjab University, Chandigarh-160014.

### SUKHADIA UNIVERSITY

UDAIPUR

Advertisement No. 7/86

Dated : 8th July, 1986

Applications are invited on prescribed application form for the following post in Teaching/ Research/ Extension on regular and adhoc basis in the University. The application form and full details about qualifications etc. can be obtained from Shri A.L. Sahlot, Assistant Registrar (Recruitment) University Administrative Office, Sukhadia University, Udaipur Pin-313001 on payment of Rs. 5/- through Crossed Indian Postal Order payable to the Comptroller, Sukhadia University, Udaipur alongwith a self addressed envelope of  $27$  cms.  $\times$   $12$  cms. size bearing Postal stamp of Rs. 1.50 only and send the application form duly completed in all respect on the same address upto 9th August, 1986.

Category "A" on regular basis

#### 1. Associate Professor

Pay Scale : Rs. 1200-50-1300-60-1900.

(a) Senior Scientific Officer (University Service Instrumentation Centre).	—1
(b) Hindi	—1
(c) Mining Engineering	—1
(d) Electrical Engineering	—1

#### 2. Assistant Professor

Pay Scale : Rs. 700-40-1100-50-1600.

(a) Agriculture Economics	—4
(b) Electrical Engineering	—1
(c) Mechanical Engineering	—1
(d) Mining Engineering	—1

#### 3. Lady Research Investigator

Pay Scale: Rs. 640-20-900-25-1000-30-1180.  
(Population Research Centre) —1

Category "B" Purely on Adhoc Basis :

#### 1. Associate Professor

Pay Scale : Rs. 1200-50-1300-60-1900.

(a) Child Development	—1
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#### 2. Assistant Professor

Pay Scale : Rs. 700-40-1100-50-1600.

(a) Geology	—1
(b) Zoology	—1
(c) Psychology	—1

- (d) Dairy Chemistry
- (e) Dairy Engineering
- (f) Accountancy and Statistics
- (h) Banking and Business Economics
- (i) Business Administration

#### 3. Research Associate

Pay Scale: Re. 1500/- p.m. fixed and house rent, medical facility as per University rules.

- (a) Plant Pathology
- (b) Agriculture Economics
- (c) Agriculture Statistics

#### Qualifications

Generally as prescribed by the University Grants Commission/University. Details of qualifications will be supplied alongwith application form.

#### General Notes

1. In case of CATEGORY "A" ASSOCIATE PROFESSOR—Mining Engineering Electrical Engineering, ASSISTANT PROFESSOR—Mining Engineering and LADY RESEARCH INVESTIGATOR. CATEGORY "B" ASSISTANT PROFESSOR—Psychology and Business Administration the candidates who have already applied in response to our previous Advertisement No. 6/84 dated 30-7-1984, 1/86 Dated 1-1-1986, 2/86 Dated 25-1-1986 and 5/86 Dated 15-4-1986 need not to apply again but they are requested to please send their fresh Bio-data (One side typed) on plain paper if they wish.

2. Number of posts may be increased or decreased.

3. The qualifications may be relaxed in case the response is poor.

4. Application forms received after the expiry of the last date, may, also be considered at the discretion of the Vice-Chancellor.

5. 16% posts would be reserved for Scheduled Caste and 12% for Scheduled Tribes, subject to general suitability.

6. A higher start in the grade may be considered for exceptionally qualified candidate.

7. The University reserves the right not to fill up any post(s) advertised.

8. Candidate can be posted anywhere in Rajasthan and his designation can be changed as and when need arises.

G.S. Sharma  
REGISTRAR

**ANNAMALAI UNIVERSITY**  
**RAJAH MUTHIAH MEDICAL COLLEGE**

APPLICATIONS are invited in the prescribed form for the following posts in the Rajah Muthiah Medical College of this University :

S. No.	Name of the Post	Number of Post
1.	Professor of Anatomy	1
2.	Lecturer in Anatomy	1

**Qualifications**

For Serial No. 1

- (i) M.S. (Anatomy) or M.B.B.S. with M.Sc. (Anatomy) or Ph.D. (Medical Anatomy) or D.Sc. (Medical Anatomy)
- (ii) Experience as Reader in Anatomy for atleast 4 years in a Medical College.

For Serial No. 2

- M.S. (Anatomy) or M.B.B.S. with M.Sc. (Anatomy) or Ph.D. (Medical Anatomy) or D.Sc. (Medical Anatomy)

**Scale of Pay**

Professor of Anatomy : Rs. 1500-60-1800-100-2000-125,2-2500 with usual allowances.

Lecturer in Anatomy : Rs. 700-40-1100-50-1600 with usual allowances (Pending revision in the light of the recommendations of the University Grants Commission)

Higher start will be considered keeping in view long experience, special qualifications etc.

Payment of non-practising allowance is admissible in accordance with rules of the University.

Candidates invited for the post of Professor will be paid a single First Class to and fro railway fare.

Those who are in service should route their applications through proper channel.

Application forms can be had from the undersigned on payment of Rs. 10/- by cash, money order, postal order (not refundable). Filled in applications (with five additional copies) should reach the undersigned on or before 10-8-1986.

**R. Rajamanickam  
REGISTRAR**

**NATIONAL INSTITUTE OF  
SCIENCE, TECHNOLOGY AND  
DEVELOPMENT STUDIES**  
**(A Constituent Establishment of CSIR)**  
**HILLSIDE ROAD, NEW DELHI-110012.**

National Institute of Science, Technology and Development Studies (NISTADS) (CSIR) is engaged in generating information, knowledge and expertise in the field of science and technology policies and analysing these policies in the context of developmental process. The research programmes of the Institute are built around:

1. Planning, Organization and Ma-

1. Management of Science and Technology;
2. Technological Forecasting, Assessment, Absorption and Industrial Development;
3. Issues at the interface of Science, Technology and Society;
4. Historical and Philosophical Studies concerning Science and Technology;
5. Comparative Studies and International Cooperation in Science and Technology;
6. Information Systems and Archival Resources on S & T;

7. Mathematical Modelling and Systems Analysis approach to S & T studies.

The Institute provides excellent opportunities and creative environment for undertaking multidisciplinary research studies in the above mentioned areas. The Institute at present has scientific and technical manpower strength of 53 which is likely to grow to 84 by the end of the Seventh Five Year Plan. The Institute has a well equipped library and a Computer Centre having Usha Alpha AM-1042E (with BASIC, FORTRAN, COBOL and PASCAL compilers), Eagle PC/AT and a Wang WP-30 Word Processing System. The Institute invites applications for the posts mentioned below. Only those interested in pursuing careers in the above areas of research should apply.

1. Scientist C : (Rs. 1100-50-1600)—Four Posts.

**Qualifications and Experience Essential:**

- (i) First class master's degree in sciences (including mathematics)/ Social Sciences/Humanities/B.E.Tech./MBA with 6 years experience or;
- (ii) M. Phil/M.E./M. Tech./M.D./M.V. Sc. with 4 years experience or;
- (iii) Ph.D. with 2 years experience. The candidates should have studied at least one of the Science subjects or Mathematics at the level of graduation.

**Desirable :** Research experience/diploma/degree in science and technology policy and development related issues or experience of using systems analysis/operations research/mathematical modelling (including experience of handling computers) approaches to S & T studies as evidenced by published work in the area.

**Job Requirements :** The selected candidate would be expected to conduct original research in the areas of interest to NISTADS. The persons may also have to lead research teams or work as a member of existing teams. Persons may also be involved in the management of Computer based information systems.

**Upper Age Limit : 40 years.**

2. Scientist B : (Rs. 700-40-900-EB-40-1100-50-1300)—Four Posts (2 Gen., 1 SC, 1 ST).

**Qualifications and Experience :** First class Master's degree in science (including mathematics), Social Sciences/Humanities/B.E.Tech./M. Phil/M.Sc. (Ag.)/M.B.B.S./M. Pharm./M.V.Sc./LL.M. or Ph.D. in any of these.

**Desirable :** Preference will be given to people with research experience in S & T studies through systems analysis/operations

tions research/informatics/Journalism; Sociological or economic approaches. Few posts require knowledge of Sanskrit or Persian with capability to handle original texts/Diploma in Archives.

**Upper Age Limit : 35 years.**

**3. Librarian :** One post in Group III (4) (Rs. 700-40-900-EB-40-1100-50-1300).

**Qualifications and Experience :** Bachelor's degree in Library Science having 8-10 years experience in a recognised library; or

First class masters degree in Library Science or first class in Associateship in Information Science from INSDOC/DRTC, having 4 to 6 years experience in a recognised library.

**Desirable :** People with experience of work with computer based classification systems, cataloguing and management of information bases will be preferred.

**Upper Age Limit : 35 years.**

**4. Senior Scientific Assistant :** One post. (Rs. 550-25-750-EB-30-900).

**Qualifications and Experience :** Master's degree in Sciences/Social Sciences/Humanities/Commerce/B.E./B. Tech. or First class B.Sc./B.Sc. (Home Science)/B.Sc. Ag./B.V.Sc./B. Lib. Sc./Diploma in Engineering — 3 years duration, or equivalent plus 3 years relevant experience.

**Desirable :** People with experience in Informatics/knowledge of Sanskrit/Persian for translation of original texts relating to science and technology into English will be preferred.

**Upper Age Limit : 30 years.**

**5. Junior Technical Assistant :** Five posts (2 Gen., 2 S.C., 1 S.T.) (Rs. 425-15-500-EB-15-560-20-700).

**Qualifications and Experience :** B.Sc. or Diploma in Engineering/Tech. (3 years) or equivalent. People with experience in a research organisation or industrial units with an awareness of Science and Technology policy issues shall be preferred.

**Upper Age Limit : 30 years.**

**6. Junior Documentation Assistant :** One post. (Rs. 425-15-500-EB-15-560-20-700).

Reserved for physically handicapped persons with limited disability so that they can undertake documentation work.

**Qualifications and Experience :** B.Sc./B. Lib. Sc. or equivalent with experience in documentation and ability of extracting from scientific texts. Knowledge of typing/handling of Word Processor is essential.

**Upper Age Limit : 30 years.**

**7. Junior Engineer :** One post (Rs. 425-15-500-EB-15-560-20-700).

**Qualifications and Experience :** Diploma in Electrical/Electronics Engineering of 3 years duration or equivalent with experience in handling electrical and electronic equipments/electronic exchanges/word processors/computers etc.

**Upper Age Limit : 30 years.**

**8. Key Board Operator/Cataloguer (Grade VI) :** 6 Posts (3 Gen., 1 ST., 1 SC, 1 Ex-Servicemen) Rs. 380-12-440-EB-15-560-EB-20-640).

**Qualifications and Experience :** Matriculation (10 years in the new system) with 2-3 years experience on various data preparation devices—key to tape/key punch verifier/word processors with an average speed of 10,000 depressions per hour. Persons having the knowledge and experience of computer programming/cataloguing shall be preferred.

**Upper Age Limit : 30 years.**

**9. Junior Hindi Translator :** One post (for ST) (Rs. 425-15-500-EB-15-560-20-700).

**Qualifications and Experience :** Master's degree of a recognised university in Hindi/English or any other subject with Hindi/English as main subject at degree level plus recognised Diploma Certificate course in translation from Hindi to English and vice-versa or two years experience in translation of scientific and technical literature from Hindi to English and vice-versa in Central/State Government offices, including Government of India Undertaking.

**Job Requirements :** The incumbent will be required to undertake translation of official scientific literature/correspondence, etc., from English to Hindi and vice-versa, and any other work that may be assigned.

**Upper Age Limit : 28 years.** (Relaxable for 5 years for ST category).

**10. Hindi Typist :** One post (ST). (Rs. 260-6-290-EB-6-326-8-390-10-400).

**Qualifications and Experience :** Matriculation or equivalent with a speed of 25 words per minute in typewriting in Hindi (to be tested).

**Upper Age Limit : 28 years.** (Relaxable for five years for ST).

**Total emoluments at the minimum of scale:**

1.	1100-1600	Rs. 2,965.35
2.	700-1300	Rs. 2,114.00
3.	425- 700	Rs. 1,434.90
4.	380- 640	Rs. 1,353.10
5.	260- 400	Rs. 990.70

(The above scales are likely to be revised).

Appointments in the scale of Rs. 700-1300 and above will be on contract for a period of six years (including the period of probation of two years) in the first instance except for CSIR employees already confirmed against lower posts. The remaining posts are pensionable subject to the CSIR rules and regulations in force.

Applications from employees working in Govt. Deptt./Public Sector Undertakings/Organisations and Govt. funded agencies will be considered only if forwarded through proper channel and with a clear certificate that the applicant will be relieved within one month of receipt of the appointment order. Age limit can be relaxed in case of exceptional candidates.

The candidates should enclose a certificate in prescribed form from an appropriate authority in authentication of their belonging to the reserved community/category.

Since it is not possible to call all the eligible candidates for interview/personal discussion/test, the applicants shall be short listed for the purpose, and the decision of the Institute will be final in this regard.

Candidates are requested to give clearly in the application form the name of the relation with relationship, if any working in NISTADS/in any Laboratory/Institute and Headquarters of the CSIR.

Canvassing in any form and/or bringing in any influence, political or otherwise, will be treated as a disqualification for the post(s).

Single II class rail fare as admissible under the rules will be paid to the candidates called for test and interview for all posts except post at S. No. 8.

Application form for the above posts are obtainable (free of cost) from the Director, National Institute of Science, Technology and Development Studies, Hillside Road, New Delhi - 110 012 on or before 11-8-86 for which a self-addressed stamped envelope (10X23 cm) may be sent. The completed application form together with the application fee of Rs. 8/- (Rs. 2/- for SC/ST candidates) for all posts except posts at Sl. No. 8 and 10 in the form of crossed Indian Postal Order in favour of "Director, NISTADS, New Delhi" should reach this office on or before 29-8-86.

"INTERIM ENQUIRIES WILL NOT BE ENTERTAINED".